

LNPT[™] COLORCOMP[™] COMPOUND W1000EXP

REGION ASIA

DESCRIPTION

LNP COLORCOMP W1000EXP compound is based on unfilled Polybutylene Terephthalate (PBT) resin.

GENERAL INFORMATION	
Features	Aesthetics/Visual effects, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Home Decoration, Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	200	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
Hardness, Rockwell R	117	-	ASTM D785
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Gardner, 23°C	40	J	ASTM D3029
Modified Gardner, 23°C	40	J	ASTM D3029
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	54	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E831
CTE, 60°C to 138°C, flow	1.39E-04	1/°C	ASTM E831
Relative Temp Index, Elec ⁽²⁾	120	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	120	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	140	°C	UL 746B
PHYSICAL ⁽¹⁾			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.31	-	ASTM D792
Specific Volume	0.76	cm ³ /g	ASTM D792
Water Absorption, (23°C/24hrs)	0.08	%	ASTM D570
Mold Shrinkage, flow, 0.75-2.3 mm ⁽³⁾	0.9 – 1.6	%	SABIC method
Mold Shrinkage, flow, 2.3-4.6 mm ⁽³⁾	1.5 – 2.3	%	SABIC method
Mold Shrinkage, xflow, 0.75-2.3 mm ⁽³⁾	1 – 1.7	%	SABIC method
Mold Shrinkage, xflow, 2.3-4.6 mm ⁽³⁾	1.6 – 2.4	%	SABIC method
Melt Viscosity	600	Pa-s	SABIC method
ELECTRICAL ⁽¹⁾			
Volume Resistivity	>4.E+16	Ω.cm	ASTM D257
Dielectric Strength, in air, 1.6 mm	23.2	kV/mm	ASTM D149
Dielectric Strength, in air, 3.2 mm	15.7	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	23.2	kV/mm	ASTM D149
Dielectric Strength, in oil, 3.2 mm	15.7	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.3	-	ASTM D150
Relative Permittivity, 1 MHz	3.1	-	ASTM D150
Dissipation Factor, 100 Hz	0.002	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥6	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 4	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	4	PLC Code	ASTM D495
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-103938350	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	245 – 260	°C	
Nozzle Temperature	240 – 255	°C	
Front - Zone 3 Temperature	245 – 260	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Mold Temperature	50 – 75	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.013 – 0.025	mm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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